

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 1-9, 11-30, 32-35, 37-45, 47 and 49-55 without prejudice or disclaimer and ADD new claims 56-59 in accordance with the following:

1-9 (cancelled)

11-30 (cancelled)

32-35 (cancelled)

37-45 (cancelled)

47 (cancelled)

49-55 (cancelled)

56. (new) A recording medium, comprising:

a disc shaped substrate; and

groove tracks and land tracks formed on the substrate, wherein:

individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles,

the first and second wobbles of each individual groove track are out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual groove track, and

the first and second wobbles of each individual land track are out of phase with respect to each other.

57. (new) The recording medium of claim 56, wherein:

the first and second wobbles of each individual groove track are out of phase by π with respect to each other, and

the first and second wobbles of each individual land track are out of phase by π with respect to each other.

58. (new) A recording medium, comprising:

a disc shaped substrate; and

groove tracks and land tracks formed on the substrate, wherein:

individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles,

the first and second wobbles of each individual land track are out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual land track, and

the first and second wobbles of each individual groove track are out of phase with respect to each other.

59. (new) The recording medium of claim 56, wherein:

the first and second wobbles of each individual land track are out of phase by π with respect to each other, and

the first and second wobbles of each individual groove track are out of phase by π with respect to each other.

60. (new) A servo controller in an optical recording and/or reproducing apparatus including a pickup unit for tracking an optical recording medium having wobbled groove and land tracks and a physical identifier area (PID) which identifies a beginning of a track having information recorded thereon, wherein individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles, the first and second wobbles of each individual groove track being out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual groove track, and the first and second wobbles of each individual land track being out of phase with respect to each other, the servo controller comprising:

a photo detector which outputs first and second light signals reflected from the optical recording medium;

a wobble signal detector which detects the PID and a wobble signal from one of the first and second light signals;

a wobble signal determiner which determines whether the wobble signal corresponds to a land or a groove based on determining a phase of the wobble signal and which of the first and second light signals includes the wobble signal, and outputs a determination signal; and

a controller which generates a control signal to control a servo for moving the pickup unit based on the determination signal, the detected wobble signal, and the detected PID.

61. (new) A servo controller in an optical recording and/or reproducing apparatus including a pickup unit for tracking an optical recording medium having wobbled groove and land tracks and a physical identifier area (PID) which identifies a beginning of a track having information recorded thereon, wherein individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles, the first and second wobbles of each individual land track being out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual land track, and the first and second wobbles of each individual groove track being out of phase with respect to each other, the servo controller comprising:

a photo detector which outputs first and second light signals reflected from the optical recording medium;

a wobble signal detector which detects the PID and a wobble signal from one of the first and second light signals;

a wobble signal determiner which determines whether the wobble signal corresponds to a land or a groove based on determining a phase of the wobble signal and which of the first and second light signals includes the wobble signal, and outputs a determination signal; and

a controller which generates a control signal to control a servo for moving the pickup unit based on the determination signal, the detected wobble signal, and the detected PID.

62. (new) A method of controlling a servo in an optical recording and/or reproducing apparatus including a pickup unit for tracking an optical recording medium having wobbled groove and land tracks and a physical identifier area (PID) which identifies a beginning of a track having information recorded thereon, wherein individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles, the first and second wobbles of each individual groove

track being out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual groove track, and the first and second wobbles of each individual land track being out of phase with respect to each other, the servo controller comprising:

detecting first and second light signals reflected from the optical recording medium;
detecting the PID and a wobble signal from one of the first and second light signals;
determining whether the wobble signal corresponds to a land or a groove based on determining a phase of the wobble signal and which of the first and second light signals includes the wobble signal, and outputting a determination signal; and
generating a control signal to control a servo for moving the pickup unit based on the determination signal, the detected wobble signal, and the detected PID.

63. (new) A method of controlling a servo in an optical recording and/or reproducing apparatus including a pickup unit for tracking an optical recording medium having wobbled groove and land tracks and a physical identifier area (PID) which identifies a beginning of a track having information recorded thereon, wherein individual land tracks are arranged alternately with individual groove tracks, each individual land track and each individual groove track having respective first and second wobbles, the first and second wobbles of each individual land track being out of phase with respect to each other and in phase with the first and second wobbles, respectively, of a next individual land track, and the first and second wobbles of each individual groove track being out of phase with respect to each other, the servo controller comprising:

detecting first and second light signals reflected from the optical recording medium;
detecting the PID and a wobble signal from one of the first and second light signals;
determining whether the wobble signal corresponds to a land or a groove based on determining a phase of the wobble signal and which of the first and second light signals includes the wobble signal, and outputting a determination signal; and
generating a control signal to control a servo for moving the pickup unit based on the determination signal, the detected wobble signal, and the detected PID.